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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.
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09/367,483 10/18/99 INAGAKI T IDE61601

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AIR MAIL

EXAMINER

ZIMMER, M

ART UNIT

PAPER NUMBER

1712

DATE MAILED:

10/31/00

Please find below and/or attached an Office communication concerning this application or proceeding.

Commissioner of Patents and Trademarks

Office Action Summary

Application No.

09/367,483

Applicant(s)

INAGAKI ET AL.

Examiner

Marc S. Zimmer

Art Unit

1712

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136 (a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).

Status

- 1) ☒ Responsive to communication(s) filed on 29 November 1999.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-16 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-16 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claims _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are objected to by the Examiner.
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved.
- 12) ☒ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. § 119

- 13) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d).
- a) ☒ All b) ☐ Some * c) ☐ None of the CERTIFIED copies of the priority documents have been:
1. ☒ received.
2. ☐ received in Application No. (Series Code / Serial Number) _____.
3. ☐ received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgement is made of a claim for domestic priority under 35 U.S.C. & 119(e).

Attachment(s)

- 15) ☐ Notice of References Cited (PTO-892)
- 16) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 17) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 4.
- 18) ☐ Interview Summary (PTO-413) Paper No(s). _____
- 19) ☐ Notice of Informal Patent Application (PTO-152)
- 20) ☐ Other:

DETAILED ACTION

Oath/Declaration

Proof of authority of the legal representative under 37 CFR 1.44 has been omitted and must be provided. Applicant is now required to submit a substitute declaration or oath to correct the deficiencies set forth.

Specification

A substitute specification including the claims is required pursuant to 37 CFR 1.125(a) because the copy provided contains a dark line running perpendicular to the text on every page that masks numerous characters which would not be acceptable in the event that the application issues as a patent.

A substitute specification filed under 37 CFR 1.125(a) must only contain subject matter from the original specification and any previously entered amendment under 37 CFR 1.121. If the substitute specification contains additional subject matter not of record, the substitute specification must be filed under 37 CFR 1.125(b) and must be accompanied by: 1) a statement that the substitute specification contains no new matter; and 2) a marked-up copy showing the amendments to be made via the substitute specification relative to the specification at the time the substitute specification is filed.

The disclosure is objected to under 37 CFR 1.71, as being so incomprehensible as to preclude a reasonable search of the prior art by the examiner. For example, the following items are not understood:

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1) On page 4 and again on page 7, Applicant mentions "adjusting" the refractive index of a silicone gel in a compound step. However, there is no further description as to how the compounding process is carried out except that which is mentioned in the first paragraph of page 7. Indeed, the Examiner is unfamiliar with how a pre-existing gel is further gelatinized.

2) Applicant speaks to an addition reaction taking place "in a binding region where cross-linking density is low" in the final paragraph of page 7. The nature of the "binding region" is not clear. Also, the statement appears to suggest that the crosslinking agent, in this case an organohydrogenpolysiloxane, is introduced in a manner that allows the practitioner to selectively crosslink a portion of the gel containing vinyl-terminated polysiloxane without any indication as to how this is accomplished.

3) In paragraph 3 of page 8, the crosslinked binding region is characterized as being "in the range of 30% to 10% of the theoretical equivalent of the polyorganosiloxane...." This description is inconsistent with the Examiner's belief that the "binding region" is a particular volume of space within the siloxane gel. The sentence is interpreted, possibly, to mean that the reactive alkenyl groups in the binding region of the gel number 10% to 30% of the quantity of Si-H bonds in the added organohydrogensiloxane. A similar confusing statement is made in paragraph 1 of page 12.

4) In the following paragraph, Applicant begins with, " If the gel is produced beyond the above cross-linked region...." It appears that Applicant purports to suggest

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that the gel will take on the properties of an elastic material if the crosslinking reaction occurs beyond the binding region, which remains ambiguous.

Applicant is required to submit an amendment which clarifies the disclosure so that the examiner may make a proper comparison of the invention with the prior art.

Applicant should be careful not to introduce any new matter into the disclosure (i.e., matter which is not supported by the disclosure as originally filed).

A preliminary examination of this application reveals that it includes terminology which is so different from that which is generally accepted in the art to which this invention pertains that a proper search of the prior art cannot be made. For example: The term "intimidate" used in the first paragraph of page 12 is not recognized by the Examiner as a word used to describe a chemical composition in a specified physical state.

Applicant is required to provide a clarification of these matters or correlation with art-accepted terminology so that a proper comparison with the prior art can be made. Applicant should be careful not to introduce any new matter into the disclosure (i.e., matter which is not supported by the disclosure as originally filed).

Figure 6 is alluded to in the second paragraph of page 23 but is not supported with a brief description or the drawing itself.

Claim Rejections - 35 USC § 112

The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

Claims 1-16 are rejected under 35 U.S.C. 112, first paragraph, as based on a disclosure which is not enabling. Compounding techniques critical or essential to the practice of the invention, but not included in the claim(s) are not enabled by the disclosure. See *In re Mayhew*, 527 F.2d 1229, 188 USPQ 356 (CCPA 1976).

Applicant describes a silicon-based formulation that, by virtue of its imperviousness to changes in temperature and humidity, resistance to chemical change, and its valuable flow characteristics is a good material for optical conductors. The first and seventh claims provide a general method for preparing the formulation which is a gel having low crosslink density. Claim 10 speaks to the gel prepared from the methods outlined in claims 1 and 7. The method entails a compounding step and a reaction step. In the compounding step, which appears to be the primary novel feature of the instant invention, a silicon gel comprising a vinyl group-terminated organopolysiloxane is gelatinized allowing for the adjustment of the specified refractive index of said organopolysiloxane. (Applicant states that the refractive indices of the medium used as a conductor and the core of the optical fibers that are connected by it should be nearly equal in order to minimize the diffusion of light.) Applicant does not offer any instructions as to what the gelatin-forming step requires. For example, does the "gelatinization" to a material with a specific refractive index necessarily mandate the use of a specific solvent? The methodology behind said adjustment of the refractive index of the polymer should be elucidated in sufficient detail enabling one of ordinary skill in the art to perform the compounding step.

In the second step of the process for obtaining the aforementioned gel, the flexible silicone gel material that was adjusted in the previous step is reacted in a binding region wherein the cross-link density is low. The language of the claim, and of the specification that supports it, is construed by the Examiner to mean that a non-viscous crosslinking agent is somehow introduced into a specific region of the initial gel thereby facilitating hydrosilylation in only a portion of said gel. However, a detailed procedure fully elucidating Applicant's approach is not provided. Moreover, insofar as the silicone gel material is apparently a siloxane polymer bearing vinyl groups at the terminal positions, the entire gel material should, initially, be mostly absent of crosslinks since Applicant does not describe a pre-reaction involving some of the vinyl groups. Thus, it is difficult for the Examiner to differentiate between the binding region "where crosslinking density is low" and the remaining portions of the gel.

The remaining claims, which include all of the limitations of either claims 1, 7, or 10 are also rejected.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Marc S. Zimmer whose telephone number is 703-605-1176. The examiner can normally be reached on Monday-Friday 8:00-4:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Robert Dawson can be reached on 703-308-2340. The fax phone numbers for the organization where this application or proceeding is assigned are 703-872-9310 for regular communications and 703-872-9311 for After Final communications.

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Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-308-0661.

A handwritten signature in cursive script, appearing to read "Robert Dawson".

Robert Dawson
Supervisory Patent Examiner
Technology Center 1700

Marc S. Zimmer
(703) 605-1176
October 30, 2000